

### III. REMARKS

The Examiner bears the initial burden of establishing a *prima facie* case of unpatentability. In the present case, this burden requires the Examiner to establish a *prima facie* case concerning the existence in the prior art of claim elements the Examiner recognizes are missing from *Bosch*. Specifically, to establish a *prima facie* case of obviousness, there must be some evidence of a suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art to modify the reference.<sup>1</sup> Where the references cited by the examiner fail to show “some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references,” the Examiner has not carried the burden of establishing a *prima facie* case of unpatentability.<sup>2</sup> Where the Examiner fails to establish a *prima facie* case, the rejection is improper and shall be reversed.<sup>3</sup>

The present invention combines a data processing structure with a graphical user interface (GUI) to create an information analysis tool wherein multiple functions are combined in a network to analyze information from multiple data sources. The functional network is created, and graphically represented to the user, by linking individual operations together. The combination of individual operations is not limited by the input or output characteristic of any single operation. The form of the input to or output from any individual operation, whether from a database or from another operation, is the same. That is, both the input to and the output from an analysis function is a list of document identifiers and corresponding document characteristics.

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<sup>1</sup> MPEP 706.02(j). See also *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (explaining that the teachings or suggestion to make the claimed invention must be found in the prior art and not based upon the Applicant's disclosure.)

<sup>2</sup> *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598-99 (Fed. Cir. 1988).

<sup>3</sup> *Id.*

Because the form of the input and output from each operation is the same, arbitrary combinations of operations may be created.

Moreover, functional networks of individual operations are used for database retrieval as well as to filter data streams. Furthermore, the user is able to create a visual representation of the structure forming a functional network which may be dynamically updated as new data is added or functions switched in or out. Because, *inter alia*, the network structure dynamically responds to information as it is presented to the network, the visual representation of the network conveniently provides the user with information concerning the characteristics of the database or stream of data that are substantially unavailable through conventional search, filtering, or clustering techniques.

**A. The Cited References Do Not Disclose All of the Claimed Elements**

The three pending independent claims — claims 1, 9 and 22 — include common elements of the method of the present invention. Each of the independent claims includes the following elements of a method of analyzing information:

- i) selecting a plurality of operators for analyzing information,
- ii) linking those operators together in a network, and
- iii) creating a visual representation of the network,
- iv) after evaluating the operators against the data source, creating a visual representation of an output indicator for each of the operators.

In the office action dated June 25, 2003, the Examiner rejected all pending independent claims as obvious over the reference *Bosch* in combination with various other references, and made the rejections final. Applicant respectfully suggests that the rejection is improper. First, all of the independent claims include the step of selecting a plurality of *operators for analyzing information*. As cited by the Examiner, *Bosch* merely discloses

application objects 28 perform a variety of graphics generation, analysis functions and data access procedures. The application objects 28 encapsulate the details of: interacting with the computer user, obtaining data structure via metadata, generating Structured Query Language (SQL), accessing network infrastructure, displaying/interacting with graphical displays, and linking to third party products.<sup>4</sup>

The “application objects” of *Bosch* include the activities of interacting, obtaining data structure, generating, accessing, displaying/interacting, and linking. However, even a liberal construction of the disclosure of *Bosch* does not include the step of selecting a plurality of operators for analyzing information.

Second, all of the independent claims include the step of linking the selected plurality of operators for analyzing information together in a network. *Bosch* does not disclose such a network of operators. Rather, as the Examiner indicates, the analysis network of *Bosch* “can include analysis control objects 46 such as: data sources, filters, aggregators, sorts, matches, graphs, and tabular views.”<sup>5</sup> In other words, the analysis network of *Bosch* is not a network of operators as claimed. The present invention as claimed distinguishes between data sources and the network of operators for analyzing information that are linked together in a network, unlike *Bosch*, which makes no such distinction. Furthermore, this distinction between the present invention and the disclosure in *Bosch* is not a minor distinction. The claimed invention uses the network of selected operators in subsequent claimed steps, and in those subsequent steps the network of selected operators is distinguished again from data sources.

Third, none of the disclosures in *Bosch* cited by the Examiner disclose, teach or imply creating a visual representation of a network of linked operators as recited in independent claims 1, 9, and 22 of the present application. Linking a plurality of operators for analyzing information

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<sup>4</sup> *Bosch*, col. 3, ll. 1-7.

<sup>5</sup> *Bosch*, col. 3, ll. 54-56.

together in a network and creating a visual representation of such a network are novel concepts that neither *Bosch* nor the combination of *Bosch* with the other cited references discloses. As argued *supra* with respect to generating a network of linked operators, unlike *Bosch*, the claimed invention's visual representation of a network of linked operators is clearly distinct from *Bosch*'s graphic icons that represent an "analysis network" that "can include analysis control objects 46 such as: data sources, filters, aggregators, sorts, matches, graphs, and tabular views."<sup>6</sup>

Absent any disclosure in *Bosch* of a selecting a plurality of operators, generating a network of the selected operators, or creating a visual representation of such a network, it is impossible for *Bosch*, either individually or in combination with other references, to render the claimed invention obvious. Moreover, the cited references do not suggest modifying their respective disclosures to produce the claimed invention.

**B. The Combination of *Bosch*, *Krehel*, *Ponte*, *French* and *Smiga* Does Not Disclose All of the Claimed Elements**

As explained above, *Bosch* does not suggest or disclose several core elements of independent claims 1, 9, and 22. The Examiner has cited the secondary references of *Krehel*, *Ponte*, *French* and *Smiga* as necessary only to render additional independent claim elements, or dependent claim elements obvious. Since the Examiner does not contend that these additional references apply to the core elements of independent claims 1, 9, and 22, the combination of *Bosch* with any of these secondary reference fails to render any independent claim obvious. Moreover, the dependent claims are also non-obvious for the same reason. Specifically, the combination of cited references does not disclose selecting a plurality of operators for analyzing information, linking the operators together in a network, creating a visual network of the operators, creating corresponding output indicators and incorporating the output indicators into

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<sup>6</sup> *Bosch*, col. 3, ll. 54-56.

the visual network. Furthermore, the cited references do not suggest modifying their respective disclosures to produce the claimed invention. Therefore, pending claims 1, 3-22 and 25-33 are not obvious in view of the cited references.

**C. There is no Motivation to Combine *Bosch, Krehel, Ponte, French* and *Smiga***

In this case, the Examiner attempts to combine *Bosch* and *Krehel, Ponte, French* and *Smiga* to render various dependent claim elements obvious. It is well settled that “[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination.”<sup>7</sup> Although the suggestion to achieve the claimed invention may be found either explicitly or implicitly within the references themselves, there must be some evidence that the skilled artisan would select certain elements from the prior art references and combine them in the manner claimed.<sup>8</sup> That is, generalizations about the specific teachings of references are insufficient to support a determination of obviousness.

**1. The Combination of *Bosch, Krehel*, and *Ponte* Does Not Disclose All of the Claimed Elements**

Claims 3-5 and 10-12 include the following elements:

a method used to analyze information including

- i) compiling a network of linked operators for analyzing information by combining multiple operators into a composite operator,
- ii) assigning a document identifier to an operator;
- iii) combining those operators with assigned identifiers into an operator database, and
- iv) inverting the operator database.

<sup>7</sup> *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

<sup>8</sup> *Ecolchem, Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 1372, 56 U.S.P.Q.2d 1065, 1073 (Fed. Cir. 2000) (holding that without specific evidence to modify the teachings of prior art references, the obviousness determination, based upon such modified references, is improper).

The Examiner has cited the tertiary reference of *Ponte* as disclosing “document identifier, feature of document and term counts as claimed”<sup>9</sup> sufficient to render obvious all of elements i), ii), iii), and iv) listed. Once again, the Examiner misunderstands the novel aspects of the invention as claimed. As an initial matter, the document identifiers, features of documents and term counts disclosed in *Ponte* simply do not teach, disclose, or imply combining multiple operators into a composite operator, or assigning a document identifier to an operator. The failure of *Ponte* to disclose such features is alone sufficient to overcome the obviousness rejection of claims 3-5 and 10-12. It must also be pointed out that nowhere does *Ponte* discuss combining operators into an *operator database*, much less inverting such an operator database. *Ponte* does discuss modifying individual search operators by adjusting weights assigned to search terms, or by adding or removing search terms in the operator. But modifying an operator or even modifying multiple operators is clearly distinct from combining multiple operators having document identifiers into a database, and it is even further distinct from inverting such a database in an information analysis process. Accordingly, Examiner’s rejection of claims 3-5 and 10-12 as obvious over *Bosch* in view of *Krehel* and further in view of *Ponte* is improper.

## 2. There is no Motivation to Combine *Bosch*, *Krehel* and *French*

In addition to the elements of independent claims 1 and 9, claims 6-8 and 13-15 further include the following elements:

- v) data sources comprising a text file, audio file, video file or picture file, and
- vi) a computer network, including the Internet;

The Examiner has cited *French*’s disclosure of “multimedia data, [and] network such as Internet as claimed”<sup>10</sup> against dependent claims 6-8 and 13-15, and argues that *French* renders

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<sup>9</sup> 6/25/03 Office Action, p. 9; *see also id.* at p. 10.

<sup>10</sup> 6/25/03 Office Action, p. 11 (rejecting claims 6-8); *see also id.* at p. 12 (rejecting claims 13-15).

the elements of claims 6-8 and 13-15 obvious. There is no dispute that multimedia data and the Internet as disclosed in *French* are prior art references. However, “[w]hen a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the reference.”<sup>11</sup> Moreover,

a rejection cannot be predicated on the mere identification in [the references] of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.<sup>12</sup>

In other words, the prior art *itself* must suggest the desirability of the modification.<sup>13</sup> Here, the Examiner has pointed to no particular teaching, suggestion or motivation in *Bosch*, *Krehel* or *French* to combine multimedia data and the Internet with a data analysis system that includes, *inter alia*, the step of creating a visual representation of a network of linked analysis operators. Accordingly, Examiner's rejection of claims 6-8 and 13-15 as obvious over *Bosch* in view of *Krehel* and further in view of *French* is improper.

### 3. There is no Motivation to Combine *Bosch*, *Krehel* and *Smiga*

Dependent claims 25-33 include the steps of automatically generating various forms of output responses and output indicators, including text messages, e-mail and voicemail messages, and transmitting the various output responses and output indicators over a computer network. The Examiner has cited *Smiga*'s disclosure of “text expression such as text message and response indicator as claimed . . . ; and transmitting information over network as claimed”<sup>14</sup> against

<sup>11</sup> *In re Rouffet*, 149 F.3d 1350, 1354, 47 U.S.P.Q.2d 1453, 1456 (Fed. Cir. 1998).

<sup>12</sup> *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (holding that the Board did not make out a proper prima facie case of obviousness when it combined and modified multiple references to make the claimed invention).

<sup>13</sup> *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q.2d 1125, 1127 (Fed. Cir. 1984).

<sup>14</sup> 6/25/03 Office Action, p. 13.

dependent claims 25-33, and argues that *Smiga* renders the elements of dependent claims 25-33 obvious. There is no dispute that the e-mail and voicemail messages, text messages and transmission over a network as disclosed in *Smiga* are prior art references. However, the Examiner has pointed to no particular teaching, suggestion or motivation in *Bosch*, *Krehel* or *Smiga* to combine text messages and transmission over a network; with a data analysis system that includes, *inter alia*, the step of creating a visual representation of a network of linked analysis operators. Accordingly, Examiner's rejection of claims 25-33 as obvious over *Bosch* in view of *Krehel* and further in view of *Smiga* is improper.

**D. Use of Hindsight Reconstruction is Inappropriate to Render Claim Obvious**

Here, in order to substantiate an obviousness rejection, the Examiner must point to some particular teaching or suggestion in *Bosch*, *Krehel*, *French* or *Smiga* that supports combining and modifying all three references to include the claimed steps of “selecting a plurality of operators for analyzing information”; “linking said operators together in a network”; “creating a visual representation of said network”; “evaluating said operators . . .” and “creating a plurality of output indicators corresponding to each of said operators . . .” Moreover, when determining the issue of obviousness, the Examiner must consider the claimed invention *as a whole*.<sup>15</sup> In other words, the Examiner cannot use hindsight reconstruction to render the present invention obvious. The fact that the Examiner had to pick and choose discrete portions from each of the four cited references to render the dependent claims of the present invention obvious shows that the invention would not have been obvious to a person of ordinary skill in the art at the time the invention was made. That is, the Examiner used the Applicant's disclosure as a blueprint to

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*Jones v. Hardy*, 727 F.2d 1524, 1529, 220 U.S.P.Q.2d 1021, 1024 (Fed. Cir. 1984).



render the present invention obvious. Such hindsight reconstruction is certainly improper.<sup>16</sup>

Accordingly, all pending claims are patentable.

**E. Other Pending Claims**

All pending dependent claims — claims 3-8, 10-21 and 25-33 — are dependent upon claims 1, 9 and 22 which have been shown to be patentable. Thus, the other pending claims are also patentable.

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*In re Rouffet*, 149 F.3d at 1357, 47 U.S.P.Q.2d at 1457.

IV. Conclusion

Because (i) *Bosch, Krehel, Ponte, French and Smiga*, either individually or in combination, fail to disclose all of the elements of claims 1, 9, and 22 as currently presented, particularly the elements that relate to “selecting a plurality of operators for analyzing information”, “linking said operators together in a network”, “creating a visual representation of said network”, “evaluating said operators . . .” and “creating a plurality of output indicators corresponding to each of said operators . . .” and (ii) because the Examiner has not pointed to any portion of *Bosch, Krehel, Ponte, French and Smiga* that suggests modifying any of those references to produce the claimed invention, the pending claims are patentable in view of the three cited references. Accordingly, Applicant respectfully requests reversal of the rejection of claims 1, 3-22 and 25-33 over the cited references.

Respectfully submitted,

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